DOCUMENT RESUME

ED 141 543 08 CE 011 385

AUTHOR Brooks, Kent
TITLE Selecting Types of Training Programs. Self-Paced Instructional Module. Module Number IV-B.
INSTITUTION Mississippi Research and Curriculum Unit for Vocational and Technical Education, State College.; Mississippi State Dept. of Education, Jackson. Div. of Vocational and Technical Education.
SPONS AGENCY Office of Education (DHEW), Washington, D.C.
PUB DATE Dec 76
GRANT G007500439
NOTE 22p.; For related documents see CE 011 375-407
AVAILABLE FROM Coordinator of Industry Services, Research and Curriculum Unit for Vocational-Technical Education, College of Education, Mississippi State, Mississippi 39762 ($50.00 for the set of 33)

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS Adult Vocational Education; *Industrial Education; Industry; Job Skills; *Leadership Training; Learning Activities; Learning Modules; *Program Design; *Program Planning; Services; Skill Development; *Teaching Methods
IDENTIFIERS *Industry Services

ABSTRACT

One of 33 self-paced instructional modules for training industry services leaders to provide guidance in the performance of manpower services by public agencies to new and expanding private industry, this module contains three sequential learning activities on selecting types of training programs. Focus is on identification of the most appropriate instructional methods and means for accomplishing predetermined training objectives compatible with the goals of the training institution and the industry. The first learning activity is designed to provide the learner with the needed background information, the second to give opportunity to apply that information in a practice situation, and the final check-out activity allows him to select types of training programs in a real work situation, e.g., when he is employed or when serving as an intern learner. Feedback devices (a learner self-test and a performance checklist) are included for use by the learner and instructor/supervisor to assess progress. Case study information and a program planning worksheet are provided for guidance in performing the objectives. (Two of the other modules also deal with identifying training needs, one on collecting framework production and training information and one on preparing a budget for an industry services project.) (JT)

Documents acquired by ERIC include many informal unpublished materials not available from other sources. ERIC makes every effort to obtain the best copy available. Nevertheless, items of marginal reproducibility are often encountered and this affects the quality of the microfiche and hardcopy reproductions ERIC makes available via the ERIC Document Reproduction Service (EDRS). EDRS is not responsible for the quality of the original document. Reproductions supplied by EDRS are the best that can be made from the original.

MODULE NUMBER IV-B

SELECTING TYPES OF TRAINING PROGRAMS

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

SELF-PACED INSTRUCTIONAL MODULE

2

Compiled by:
Kent Brooks

Published by the:

Division of Vocational-Technical Education
Mississippi State Department of Education
Jackson, Mississippi

and

Research and Curriculum Unit for Vocational-Technical Education
College of Education
Mississippi State University
Mississippi State, Mississippi

Direct inquiries to the:

Research and Curriculum Unit
for
Vocational-Technical Education
College of Education
Drawer DX
Mississippi State, Mississippi 39762
Phone - (601) 325-2510

This publication was prepared pursuant to a grant with the Office of Education, U.S. Department of Health, Education and Welfare. Contractors undertaking such projects under government sponsorship are encouraged to express freely their judgment in professional and technical matters. Points of view or opinions do not, therefore, necessarily represent official Office of Education position or policy.

Grant Number: G007500439

December, 1976

Mississippi State University does not discriminate on the grounds of race, color, religion, sex, or national origin.

TABLE OF CONTENTS

	Page
Instructional Procedure	1
Supplementary Teaching/Learning Aids	2
Objectives	2
Introduction	3
Learning Activity I: Information	4
Learning Activity II: Practice Performance	11
Check-Out Activity: Performance in Real Work Situation	12
Appendices	
A. Performance Checklist	13
B. Case Study Information	15
C. Program Planning Worksheet	21

INSTRUCTIONAL PROCEDURE

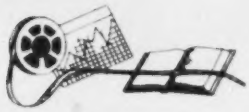
This module contains two sequential learning activities and a final check-out activity. A brief overview precedes each learning activity and the final check-out activity. Each learning activity and the final check-out activity provide learning experiences to help you accomplish the objectives. Feedback devices (learner self-test, worksheet, and performance checklist) are provided to help you determine when each objective has been accomplished. Additionally, case-study information is provided to guide you in completing the learning activities.

The first learning activity is designed to provide you with the needed **background information**. The second learning activity is designed to give you an opportunity to apply that information in **practice** situations. The **Check-Out Activity** is the final learning activity. It is designed to allow you to select types of training programs in real work situations, such as when you are employed or when you are serving as an intern learner. The **Performance Checklist** (Appendix A) is used by the learner and the instructor/supervisor to assess progress. The checklist is applicable for both practice performance and performance in the real work situation.

After reading the **Objectives** and the **Introduction** on pages 2 and 3, you should be able to determine how much of this module you will need to complete before the **Check-Out Activity**.

* If you already have the necessary **background information** required for selecting types of training programs, you may not need to complete **Learning Activity I**, p. 4.
* If you already have had **practice** in selecting types of training programs, you may not need to complete **Learning Activity II**, p. 11.
* Instead, with the approval of your instructor or supervisor, you may choose to proceed directly to the **Check-Out Activity**, p. 12, and select the type training program required for an industry when you have access to a **real work situation**.

Your instructor or supervisor may be contacted if you have any difficulty with directions, or in assessing your progress at any time.



SUPPLEMENTARY TEACHING/LEARNING AIDS

An effort has been made to make this module as self-contained as possible. The information contained in the module should be sufficient to develop "entry level" knowledge and skills. However, much more has been written on this topic. The advanced learner may wish to attain higher levels of knowledge and skills.

A list of resources which supplement those contained within the module follows. Check with your instructor or supervisor (1) to determine the availability and the location of these resources, and (2) to get assistance in setting up additional learning activities.

There are no prerequisites for completing this module. However, the module may be used in conjunction with module number VIII-C, **Determining Types of Instructional Methods and Media;** module number VIII-A, **Conducting A Task Analysis;** and module number IV-A, **Collecting Framework Production and Training Information.**

Learning Activity I

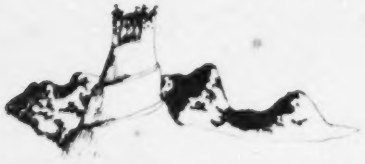
* (None)

Learning Activity II

* (None)

Check-Out Activity

* Persons who have implemented industry training programs
* Industry representative
* Instructional materials specialist



OBJECTIVES

I. After completing the required reading, take the learner self-test to demonstrate that you have attained the knowledge of selecting types of training programs. You should complete all items correctly. **(Learning Activity I)**

II. After analyzing the performance instructions, complete all the designated experiences in selecting a type training program in a practice situation. Your work must conform to the worksheet and checklist provided. **(Learning Activity II)**

III. In an actual work situation, select a type training program which is compatible with the goals of the training institution and the industry. Satisfactory performance will be realized when all items on the performance checklist (Appendix A) are rated "yes." **(Check-Out Activity)**

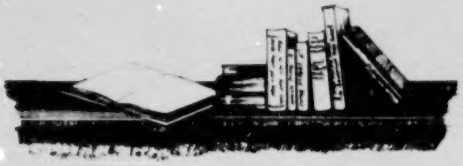
SELECTING TYPES OF TRAINING PROGRAMS

INTRODUCTION

After the industry services leader has identified the tasks and duties to be taught in an industry services training program, he/she must decide upon the type training program that will effectively and successfully meet the training needs of the industry. The type program selected must be in harmony with the resources available from the training institution.

One or more weeks of orientation in a traditional classroom setting may familiarize trainees with plant characteristics and industry manufacturing processes. However, the direct use of industry equipment and the employment of instructors from the specific industry are often required to develop specialized skills needed by the industry. This may mean a large part of the training will be conducted on the job.

The most important method to use in training is actual performance. People learn best by doing. You must devise opportunities which allow for the practice of skills. In this unit you will learn how to identify the most appropriate instructional methods and means for accomplishing predetermined training objectives.



LEARNING ACTIVITY I: INFORMATION

You should study the information presented in the following pages. After reading this material, you will demonstrate knowledge of selecting a type training program by completing the **Learner Self-Test**, p. 9. You will be evaluating your knowledge by comparing your self-test answers with the **Answers to Self-Test**, p. 9.

I. TERMS UNIQUE TO MODULE

A. **Information training.** The study of facts relative to industry production tasks.

B. **Instructional method.** Used synonymously with training method.

C. **Multi-skilled jobs.** Jobs or positions in industry which require the worker to perform two or more production tasks. Multi-skilled workers may operate two or more equipment items in the performance of tasks.

D. **Production process.** A series of steps arranged in a sequence ordinarily followed which when completed may result in the performance of a task.

E. **Skill development.** Training persons to perform industry tasks.

F. **Training method.** A way of teaching knowledge, skills, and responsibilities.

G. **Training program types.** Broad classifications of methods to be used for training.

II. TYPES OF INDUSTRY SERVICES TRAINING PROGRAMS

A. **Pre-employment training**

1. Information training only. Information would include such topics as the history of the company, descriptions of company production processes and products, company work benefits, and raw materials procurement.
2. Skill development only.
3. Information and skill training.

B. **Vestibule (in-plant) training.** This type program is conducted in the industry, but in a specially prepared classroom or area separate from the production facilities. This type

program is effective for teaching knowledge, principles, and basic skills without the use of heavy equipment in the instructional process. The various subjects which can be taught in this type program include supervisory knowledge, management skills, safety, worker relations, and new technological information.

C. **Production line (in-plant) training**

1. Skill development only
2. Information and skill development

D. **Pre-employment and in-plant training**

III. OTHER APPROACHES TO TRAINING (See module number VIII-C, Determining Types of Instructional Methods and Media.)

A. **Group-paced instruction.** This type approach assumes that all learners need all information and skills included in the curriculum, and instruction is provided to the group at the same time and rate. The group-paced approach usually involves a lecture (or audiovisual presentation) to the entire group, a demonstration of skills, followed by individual or group practice of the skills, and an evaluation of learner performance.

B. **Learner-paced instruction.** This approach assumes that not all learners need all information and skills included in a program of instruction, and that learning can occur if the individual is responsible for identifying desired knowledge and skills. The learner-paced approach has a great deal of promise for industry services training, particularly when key industry skills can be described in learning materials and small numbers of workers are needed in various job classifications.

Training institutions should be encouraged to begin establishing adult programs in plants for the purpose of up-grading and advancing worker knowledge. This is necessary in order for companies to develop and maintain continuous supplies of competent workers. The industry s . es leader can render valuable assistance to industries in setting up learner-paced training programs after initial production start-ups. Assistance could be provided on setting up vestibule learning centers, establishing ways to identify in-plant training needs, and managing in-plant learning centers.

IV. FACTORS AFFECTING THE TYPE OF TRAINING PROGRAM USED IN AN INDUSTRY SERVICES TRAINING PROGRAM.

A. **The training needs of the industry, i.e., the nature and / or complexity of training.** This is the most critical criterion to be considered when determining the type of training method. A pre-employment training program may be adequate for a small number of semi-skilled jobs. Whereas, pre-employment **and** in-plant training may be necessary for large numbers of highly skilled jobs.

B. **Time.** More time will be required to train personnel in multi-skilled jobs. However, overtraining prospective employees should be avoided.

C. **Tools and equipment.**

D. **Availability of facility.**

E. **Supplies.**

F. **Availabilty of qualified instructors.**

G. **Availability of qualified job applicants.** When the economy is on the downswing, more people will apply for the training program. More qualified job applicants will be selected, and less training will be required for those who have previous work experience or training closely related to the jobs. Of course, the availability of job applicants would not be a concern for an in-plant training program.

H. **Screening of prospective trainees.**

I. **Availability of instructional materials.**

J. **Degree of advertisement of training program.**

V. DESIRABLE PRE-EMPLOYMENT INDUSTRIAL TRAINING CONDITIONS

A. **The nature of training.** The client company usually desires trainees with entry-level skills and knowledge the same as, or closely related to, their equipment and production processes. Other areas of training requested by industries include safe work habits, economics of industry, and human relations.

B. **Tools, equipment, and supplies.** Training should be centered around tools, equipment, and supplies the same as, or closely related to, that which is used in the industry. In

cases where the equipment cannot be duplicated in the regular training program, the feasibility of acquiring items from the industry or using on-the-job training should be considered.

C. **Availability of a facility**. A training institution facility, and/or temporary training site, should be adequately equipped and available within close proximity of the client company plant site.

D. **Availability of qualified instructors**. Qualified instructors should be readily available to teach in an industry services training program. Because of the nature of industry training, instructors are usually selected from the staff of the client company, e.g., a foreman or supervisor. When the training is general in nature, instructors may be selected from qualified vocational-technical programs within the training institution.

E. **Instructional materials**. Instructional materials should be compiled or developed to support knowledge and skill development in the areas needed by the industry.

F. **Screening**. The training program may be implemented for reasons other than merely the training of applicants for entry-level jobs. The client company may also use the pre-employment training program as a means "to get to know" prospective job applicants. The primary emphasis may be focused on selecting desirable employees.

G. **Public relations**. The client company is chiefly interested in getting involved in the service community. The training program is aimed at publicizing the company, i.e., indicating what will be manufactured, what benefits the community can expect from the new industry, and steps taken to prevent environmental damage. All press releases must have the strict approval of the client company.

VI. GENERAL CONDITIONS RELATED TO THE IMPLEMENTATION OF AN IN-PLANT TRAINING PROGRAM

A. **Applicants are usually hired by the industry before in-plant training begins.**

B. **In-plant training may follow a pre-employment program, or a program to interview, counsel, and screen applicants.**

C. **The nature of training**. In-plant training is used as a training method when the client company needs highly specialized training that cannot be met adequately via a

pre-employment program.

D. **Tools and equipment**. When training is to be conducted on unique, exotic equipment, in-plant training is the proper course to take. In-plant training may be used when the equipment is non-mobile.

E. **Availability of facility**. If there is no training institution located within the client company plant site, and the erection of a temporary training site proves undesirable, in-plant training is the best course to take.

F. **Supplies**. When training requires expensive supplies and raw materials, and pre-employment skill training would be financially impractical, in-plant training is the desired course to take.

G. **Availability of qualified instructors**. When training is specialized and regular vocational-technical instructors do not have the required expertise to teach the skills and knowledge needed by the client company, plant personnel are used as instructors in the training program. Usually, when the instruction is specialized, the equipment is also. Therefore, in-plant training may be the proper program to implement.

H. **Instructional materials**. When the nature of the training is so specialized and complex so that adequate training materials cannot be compiled or developed, training should be conducted in the plant.

I. **Time**. When short notice is given to planning a training program, in-plant training may be the only alternative.

*Continue this learning activity by taking the **Learner Self-Test** which follows.

LEARNER SELF-TEST

This is a checkpoint knowledge test needed before proceeding to the task of determining the type training program required for an industry. Complete each item, and check your answers with the **Answers to Self-Test** which follow. If you fail to complete all items correctly, you may wish to refer back to part of the module information.

Indicate whether the statements below are true or false.

		True	False
1.	There are basically three types of training programs available to the industry services leader.	_____	_____
2.	Among the factors that serve as the basis for a training program, industry needs are considered the most critical.	_____	_____
3.	Training programs may be initiated for reasons other than just those implemented merely to train prospective employees.	_____	_____
4.	When prospective employees are to be trained for exotic equipment, in-plant training is likely the most appropriate program to implement for skill development.	_____	_____
5.	A qualified instructor, in most cases, means a foreman and/or supervisor from the client company.	_____	_____

ANSWERS TO SELF-TEST

1. True
2. True
3. True
4. True
5. True

*Proceed to the next learning activity for practice in selecting a type training program needed for an industry.

LEARNING ACTIVITY II: PRACTICE PERFORMANCE

You will be required to practice selecting a type training program for an industry. Several subactivities must be completed before the task is completed. You may wish to refer back to parts of the module information. You must use the **Case Study Information** found in Appendix B as a basis for completing the practice exercises. You must complete the **Program Planning Worksheet**, Appendix C. You will be evaluating your performance in selecting a type training program, using the **Performance Checklist**, Appendix A.

I. Read the **Case Study Information** shown in Appendix B. Visualize yourself as making an on-site visit of this plant. You have become acquainted with key company personnel, toured the plant, interviewed manufacturing engineers and production supervisors, and observed briefly the tasks performed.

II. Using the **Case Study Information** as a guide, complete the **Program Planning Worksheet** found in Appendix C. You must make a choice of the type program desired, and write a brief description of the program.

III. Use the **Performance Checklist** from Appendix A to check your competency in selecting a type training program for an industry. For satisfactory performance, all items on the checklist must be rated "yes."

*Completion of this learning activity should have prepared you for selecting a type training program needed by an industry in a real work situation. Proceed to the **Check-Out Activity**.

CHECK-OUT ACTIVITY: PERFORMANCE IN REAL WORK SITUATION

The activity which follows is intended to be conducted in an actual on-the-job situation. It may be completed without completing the two learning activities, if you think you have the proficiency to do so.

In an actual work situation, you must select a type training program needed by an industry. You may want to discuss the success of the various types of training programs, and combinations of these programs, with others who have implemented such programs. You must rely on industry representatives for assistance in selecting the program needed. An instructional materials specialist who has been involved in developing and implementing instructional materials in industrial training could also lend valuable assistance. Your performance will be judged by your instructor or supervisor using a checklist. All items on the **Performance Checklist** (Appendix A) must be rated "yes."

*After completing the **Check-Out Activity**, you may select another module for study. Your instructor or supervisor may be contacted if you have any difficulty in selecting a module.

APPENDIX A

PERFORMANCE CHECKLIST

Selecting types of training programs.

INSTRUCTIONS: If the performance is satisfactory, write YES in the space provided. If the performance is unsatisfactory, write NO in the space. Each item must be rated "yes" for satisfactory task performance.

1. The cost factor of the training program appears to be kept to a minimum. ☐
2. The training program selected meets client company training specifications. ☐
3. The program selected appears to best meet the needs of the trainees. ☐
4. The program selected appears to make best use of instructional personnel time. ☐

APPENDIX B

CASE STUDY INFORMATION FOR SELECTING TYPES OF TRAINING PROGRAMS

A paper-making plant has decided that the existing work force (35 people) needs additional knowledge and skills for performing plant manufacturing procedures. Simply defined, the plant procedures consist of treatment of a woodpulp substance that is dry, converting it back to a wet, mixed state, then redrying it as a finished product (paper). The industry services leader must determine whether the instructional needs can best be met in a school or community facility, or on the job. The following industry process information will assist the industry services leader in arriving at a decision.

1. **Pulping.** Dry bales of pulp sheets are first converted into a slush mixture of water and pulp fiber. Dry bales of pulp are taken to the pulping equipment by a lift truck. Bales are placed on hydraulically operated lift tables which convey the bales into the pulper tank filled with water. Packing bands must be removed from the bales of pulp sheets before conveying to the pulper.
2. **Beating.** Once the pulp sheets are in the pulper tank, beater blades beat the pulp sheets into small pieces, and at the same time mix them with water. This material is called "furnish."
3. **Storage of furnish.** From the pulper, the furnish is pumped to a series of concrete or tile holding chests prior to going to the paper machine. Gate valves are used to regulate the flow of the furnish.
4. **Refining.** The furnish is refined at this point, using various amounts of water and other pulp stock. Electronically controlled piping, pumps, valves, and gauges are used to obtain the desired consistency of the furnish. The furnish is now referred to as "stock."
5. **Cleaning.** The next step in the paper-making process is to clean the stock. The stock is pumped into other containers. More water is added to the stock. The stock is cleaned by a process causing all undesired stock materials to settle to the bottom and filter out of the system. This procedure is repeated until all sediments have been removed. Rejected material is pumped out of the system. Accepted stock goes to the paper machine.

6. **Making paper**. The paper machine consists of nine major sections. They are:

a. **Initial moisture removal**. The initial formation of the paper begins as the stock passes over wire screens to begin the extraction of moisture. The stock leaves the screen, passes through a meter to gauge the amount of stock needed, and goes to the headbox. The headbox breaks up currents established as the stock flows. All motion is eliminated at this point to obtain uniform sheet formation. Weight and density tests must be made at this point to identify needed adjustments. After leaving the initial drier section, the stock travels over a series of other water-removing devices. Large electric motors are used to power the driving mechanisms. The stock travels on a wire screen through the water removing devices. Electric sensing devices are used to guide the screen and stock through the drying process.

b. **A mechanical vacuum** is also applied to the sheet at several points to further remove moisture content. Sheets are trimmed by water streams. Broken sheets are recycled.

c. **Water use**. Millions of gallons of water are required each week to make paper. The water may be taken from a river, cleaned and released; or the water may be taken from a fresh well or some other source, cleaned and reused.

d. **Press section**. Further moisture is removed from the stock at the press section. Rubber covered rolls press and squeeze moisture from the sheet as it passes through the rolls. Mositure is absorbed by felts and removed by suction pumps.

e. **Steam drying**. Rotating steam/boiler operated driers are used to extract additional moisture from the sheet. All debris and particles remaining on the sheet are removed by a blade which moves lightly back and forth on the sheet surface.

f. **Application of water resistance compounds**. The paper sheets (still on rolls) are submerged in compounds to obtain the water resistance qualities desired by the customer.

g. **After drying**. Steam dryer cylinders are used in the after-drying processes. Final surface appearance is also obtained in this process.

h. **Winding**. The sheet is then wound on a reel spool. Electrical sounding devices are used to locate sheet flaws. Defective portions are removed during winding, and ends are spliced. Air jets are used to cut the paper. Hoists must be used to remove and

replace reel spools and filled rolls. Then, individual rolls are wound and cut to length to fill customer requirements.

i. **Roll wrapping**. Rolls are then weighed and wrapped for shipping. Lift trucks are used to handle the rolls.

7. **Testing paper**. Tests must be made on the paper to determine the ratio of water to the fiber, degree of fiber refinement, and the acidity and alkalinity of the paper (which effects the regulation of drainage of water from the fiber). Other tests made include basic weight of the paper, density, and tensile strength.

19

APPENDIX C

PROGRAM PLANNING WORKSHEET

THE PROSPECTIVE TRAINEES

1. What group(s) of workers do I want to reach?

2. What are their training needs?

3. Are their training needs similar or greatly varied?

4. What is the likely range in age and education level?

5. How well trained are they now?

6. How has training occurred in the plant?

7. How recent have the workers been in the classroom?

8. When would the workers be available for training?

THE PROSPECTIVE TRAINING PROGRAM

1. Is a training facility available in the plant?

2. Can plant equipment be used in training? If so, can training be scheduled on the production line? If not, can any of the equipment be used at the public training institution?

3. How much time will be required for training?

4. Who will provide the instruction?

5. Is cross-training desirable for the jobs?

FINAL PROGRAM SELECTION (Describe)